

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A rotary electric machine, comprising:
a rotor; and
a stator having a stator winding with a first coil end group on an axial end thereof and a second coil end on the other axial end, the stator winding including a plurality of segments, wherein:
the segments comprise a plurality of regular segments regularly arranged to provide a main portion a part of the stator winding and a plurality of irregular segments,
at least one irregular segment disposed to provide connections of the regular segments to form a remaining part of the stator winding and output leads, each of the regular segments having a turn portion disposed in the first coil end group and a pair of joining portions disposed in the second coil end group,
a first insulating layer covering the regular a first surface of the segments, and
a second insulating layer covering at least a portion of the irregular a second surface of the segments, wherein the second insulating layer has a higher insulation performance than the first insulating layer, ~~and the second surface relates to an insulation to the irregular segment and is smaller than the first surface.~~
2. (Canceled)
3. (Canceled)
4. (Currently Amended) The rotary electric machine according to claim 1, ~~wherein the regular segments have first coil end portions to form a first coil end group on a first end of the stator and second coil end portions to form a second coil end group on a~~

~~second end of the stator, and wherein the irregular segment extends from beyond the first coil end group, through a third coil end portion shaped similar to the first coil end portions.~~

5. (Currently Amended) The rotary electric machine according to claim 1, further comprising a fan, wherein ~~the segments form a coil end group on an axial end of the stator, and wherein the irregular segment provides a lead extending beyond the coil end group, the irregular segments are the lead being~~ disposed on a passage of cooling wind generated by the fan.

6. (Canceled)

7. (Canceled)

8. (Original) The rotary electric machine according to claim 1, wherein the second insulating layer is made of a different material from the first insulating layer.

9. (Original) The rotary electric machine according to claim 8, wherein the first insulating layer is made of a polyester-imide and the second insulating layer is made of the polyester-imide and a polyamide-imide.

10. (Original) The rotary electric machine according to claim 8, wherein the first insulating layer is made of a polyester-imide and the second insulating layer includes a polyamide-imide.

11. (Original) The rotary electric machine according to claim 1, wherein the second insulating layer is thicker than the first insulating layer.

12. (Canceled)

13. (New) A rotary electric machine, comprising:
a frame having a rectifier disposed at an axial end,
a rotor having a mixed flow cooling fan and a centrifugal cooling fan
respectively disposed at opposite axial ends; and

a stator having stator core and a stator winding with a first coil end group on an axial end of the stator core and a second coil end on the other axial end thereof,

wherein the stator winding includes a plurality of regular segments mounted in the stator core in a regular pattern to provide a main portion of the stator winding and a plurality of irregular segments mounted in the stator core in different patterns to provide connections of the regular segments to form the stator winding and output leads,

wherein each of the regular segments having a turn portion disposed in the first coil end group and a pair of joining portions disposed in the second coil end group, and

wherein at least a portion of the irregular segments is covered with an insulating layer of higher insulation performance than another insulation layer that covers the regular segments.

14. (New) The rotary electric machine according to claim 13,

wherein the first coil-end group and said rectifier are disposed near the centrifugal cooling fan, and

wherein a portion of said irregular segment extends from said first coil-end group to be connected to said rectifier.

15. (New) The rotary electric machine according to claim 13,

wherein each of the irregular segments has at least one joining portion disposed in the second coil-end group.